

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancel) An encaged atomic hydrogen, comprising an atomic hydrogen and a cage-like compound, said encaged atomic hydrogen having low toxicity.
2. (Cancel) A pharmaceutical composition, comprising the encaged atomic hydrogen of claim 1 in an antioxidant effective amount from about 1 mg/l to about 1000 mg/l.
3. (Cancel) The pharmaceutical composition of claim 2, further comprising a thiol antioxidant compound.
4. (Cancel) The pharmaceutical composition of claim 3, further comprising a polyphenol compound.
5. (Cancel) The pharmaceutical composition of claim 2, further comprising a liposome.
6. (Cancel) The encaged atomic hydrogen of claim 1, wherein said cage-like compound is selected from the group consisting of cobalamines, silicates, silica, quartz, zeolites, clays, porphyrines, chlorophyll, salen-manganese complexes, salen cobalt complexes and transition metal cyclic organic complexes.
7. (Cancel) A method of producing an encaged atomic hydrogen, comprising the steps of:

Preliminary Amendment

a. producing an atomic hydrogen by electrolyzing water in a chamber having a cathode compartment containing cathode water and an anode compartment containing anode water until the redox potential of said cathode water is reduced to no more than 700 mV and the pH of said cathode water becomes about 11;

b. adding a cage-like compound to said cathode compartment during said electrolysis to form an encaged atomic hydrogen; and

c. collecting said encaged atomic hydrogen from said cathode compartment.

8. (Cancel) The method of claim 7, wherein said cage-like compound is cyanocobalamin.

9. (Cancel) The method of claim 8, wherein the concentration of said cyanocobalamin is 50 ppm.

10. (Cancel) The method of claim 7, further comprising the step of adding potassium chloride to both said cathode compartment and said anode compartment during said electrolysis so as to enhance the conductivity of said water.

11. (Cancel) The method of claim 10, wherein the concentration of said potassium chloride is about 200 ppm.

12. (Cancel) The method of claim 7, further comprising the step of irradiating said cathode water with a pulsed xenon flash lamp during said electrolysis.

Preliminary Amendment

13. (Cancel) The method of claim 12, wherein said cathode water is irradiated with said pulsed xenon flash lamp at wavelengths between 185 and 230 nm.

14. (Cancel) A method of producing an encaged atomic hydrogen, comprising the steps of:

- a. producing a hydrogen plasma;
- b. adding an effective amount of water vapor to said hydrogen plasma;
- c. introducing said hydrogen plasma and said water vapor to a quartz tube; and
- d. encaging said hydrogen plasma into a cage-like compound.

15. (Cancel) The method of claim 14, wherein said hydrogen plasma is generated by a microwave generator.

16. (Currently Amended) A method of producing an antioxidant action in the body of a patient, comprising orally administering to said patient 500 ml per day of the encaged atomic hydrogen produced according to the following process: any of claims 7, 12 or 14.

a. producing an atomic hydrogen by electrolyzing water in a chamber have a cathode compartment containing cathode water and an anode compartment containing anode water until the redox potential of said cathode water is reduced to no more than 700 mV an the pH of said cathode water becomes about 11;

b. adding a cage-like compound to said cathode compartment during said electrolysis to form an encaged atomic hydrogen; and

c. collecting said encaged atomic hydrogen from said cathode compartment.